

Claims

1. An apparatus for successively making plastic bags of plastic film, each of the plastic bags having a size, the apparatus comprising:

upstream feeding means by which superposed layers of plastic film are fed intermittently along an upstream feeding path for a length which is N times as much as the size of plastic bag and at a cycle number;

heat seal means disposed in the upstream feeding path, the layers of plastic film being heat sealed by the heat seal means whenever being fed intermittently to obtain N times in number of plastic bags;

downstream feeding means by which the layers of plastic film are fed intermittently along a downstream feeding path for a length corresponding to the size of plastic bag and at a cycle number which is N times as many as the cycle number of the upstream feeding means, after being heat sealed by the heat seal means;

a cutter disposed in the downstream feeding path, the layers of plastic film being cut by the cutter whenever being fed intermittently; and

an accumulator disposed between the upstream and downstream feeding paths, the layers of plastic film being accumulated temporarily by the accumulator whenever being fed intermittently by the upstream feeding means, the layers of plastic film being then supplied from the accumulator whenever being fed intermittently by the downstream feeding means,

wherein N is an integer equal to or greater than 2.

2. The apparatus as set forth in claim 1 further comprising upstream drive means connected to the upstream feeding means and the heat seal means, downstream drive means connected to the downstream feeding means and the cutter, and control means by which the upstream drive means is controlled so that the upstream feeding means and the heat seal means can

be driven and actuated by the upstream drive means to be put into operation monitored by the control means, the downstream drive means being controlled by the control means so that the downstream feeding means and the cutter can be driven and actuated by the downstream drive means, at least one of the downstream feeding means and the cutter being stopped or actuated especially by the control means when at least one of the upstream feeding means and the heat seal means is subject to an unusualness of operation so that an operator can recognize the unusualness.

3. The apparatus as set forth in claim 1 further comprising discharge means disposed downstream of the cutter, the plastic bags being discharged by the discharge means, upstream drive means connected to the upstream feeding means and the heat seal means, downstream drive means connected to the downstream feeding means, the cutter and the discharge means, and control means by which the upstream drive means is controlled so that the upstream feeding means and the heat seal means can be driven and actuated by the upstream drive means to be put into operation monitored by the control means, the downstream drive means being controlled by the control means so that the downstream feeding means, the cutter and the discharge means can be driven and actuated by the downstream drive means, the discharge means being stopped or actuated especially by the control means when at least one of the upstream feeding means and the heat seal means is subject to an unusualness of operation so that an operator can recognize the unusualness.

4. The apparatus as set forth in claim 2 or 3 wherein the upstream drive means comprises a main servomotor and other servomotors, the heat seal means being driven and actuated by the main servomotor, the upstream feeding means being driven and actuated by other servomotors, the main servomotor generating a signal of rotation whenever being rotated, the operation being monitored and confirmed by the signal of rotation.

5. The apparatus as set forth in claim 2 or 3 wherein the downstream feeding means is delayed starting by a time less than one cycle time thereof after the upstream feeding means starting.